



Engine Ice HI-Performance

Safety Data Sheet

according to Regulation (EU) 2015/830

Date of issue:5/13/2015

Version: 1.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
Product name : Engine Ice HI-Performance

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Main use category : Industrial use, Professional use
Use of the substance/mixture : Antifreeze.
Coolant.

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

KOST USA, Inc.
1000 Tennessee Ave.
45229 Cincinnati - USA
T 1-800-661-9391 - F 1-513-492-5555
sales@KOSTusa.com - www.KOSTusa.com

1.4. Emergency telephone number

Emergency number : 1-800-424-9300
CHEMTREC (24 HOURS)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

EUH-statements : EUH210 - Safety data sheet available on request
Unknown acute toxicity (CLP: Classification, Labelling, Packaging.) - SDS : 0.11% of the mixture consists of ingredient(s) of unknown acute dermal toxicity
0.11% percent of the mixture consists of ingredient(s) of unknown acute inhalation (dust/mist) toxicity
Child-resistant fastening : No
Tactile warning : No

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
propylene glycol	(CAS No) 57-55-6 (EC no) 200-338-0	40 – 60	Not classified
sodium nitrite	(CAS No) 7632-00-0 (EC no) 231-555-9 (EC index no) 007-010-00-4	0.01 – 1	Ox. Sol. 3, H272 Acute Tox. 3 (Oral), H301 Aquatic Acute 1, H400
disodium tetraborate, anhydrous substance listed as REACH Candidate	(CAS No) 1330-43-4 (EC no) 215-540-4 (EC index no) 005-011-00-4	0.01 – 1	Repr. 1B, H360FD
sodium tolyltriazole	(CAS No) 64665-57-2 (EC no) 265-004-9	< 0.1	Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 Aquatic Chronic 2, H411
sebacic acid	(CAS No) 111-20-6 (EC no) 203-845-5	< 0.1	Not classified

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Specific concentration limits:

Name	Product identifier	Specific concentration limits: CLP
disodium tetraborate, anhydrous	(CAS No) 1330-43-4 (EC no) 215-540-4 (EC index no) 005-011-00-4	(C >= 4.5) Repr. 1B, H360FD

Full text of R- and H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. If medical advice is needed, have product container or label at hand.
- First-aid measures after inhalation : If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
- First-aid measures after skin contact : Remove contaminated clothing and shoes. Wash skin with plenty of water. Wash contaminated clothing before reuse.
- First-aid measures after eye contact : If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- First-aid measures after ingestion : Call a POISON CENTER or doctor/physician if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries : May damage fertility or the unborn child.
- Symptoms/injuries after inhalation : Inhalation may cause: irritation, coughing, shortness of breath.
- Symptoms/injuries after eye contact : Direct contact with the eyes is likely to be irritating.

4.3. Indication of any immediate medical attention and special treatment needed

All treatments should be based on observed signs and symptoms of distress in the patient.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Dry powder. Carbon dioxide. Foam. Water fog. Water spray. Sand.
- Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : No particular fire or explosion hazard.
- Hazardous decomposition products in case of fire : Carbon dioxide. Carbon monoxide.

5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Do not allow run-off from fire fighting to enter drains or water courses.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection. Wear a self contained breathing apparatus. Wear fire/flame resistant/retardant clothing. EN469.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Avoid contact with skin and eyes.

6.1.1. For non-emergency personnel

- Protective equipment : Chemical goggles or safety glasses. Wear suitable protective clothing and gloves.
- Emergency procedures : Evacuate area.

6.1.2. For emergency responders

- Protective equipment : Wear suitable protective clothing and gloves. Chemical goggles or face shield with safety glasses.
- Emergency procedures : Ventilate area.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

- For containment : Absorb and/or contain spill with inert material, then place in suitable container. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Do not allow minor leaks or spills to accumulate on walking surfaces.
- Methods for cleaning up : Take up in non-combustible absorbent material and shove into container for disposal.

6.4. Reference to other sections

Section 13: disposal information. Section 7: safe handling. Section 8: personal protective equipment.

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Avoid breathing mist, spray, vapours. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use.
- Hygiene measures : Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Store in a dry, cool and well-ventilated place. Keep container closed when not in use.
- Incompatible products : Strong bases. Strong acids. Strong oxidizers.
- Incompatible materials : Heat sources. Sources of ignition.
- Prohibitions on mixed storage : Incompatible materials.

7.3. Specific end use(s)

Antifreeze. Coolant.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

propylene glycol (57-55-6)		
Ireland	OEL (8 hours ref) (mg/m ³)	470 mg/m ³ total (vapour and particulates) 10 mg/m ³ particulates
Ireland	OEL (8 hours ref) (ppm)	150 ppm total (vapour and particulates)
United Kingdom	WEL TWA (mg/m ³)	10 mg/m ³ (particulates) 474 mg/m ³ (total vapour & particulates)
United Kingdom	WEL TWA (ppm)	150 ppm (total vapour & particulates)
sodium nitrite (7632-00-0)		
Lithuania	NRV (mg/m ³)	0.1 mg/m ³
Lithuania	Remark (LT)	Ū
USA - ACGIH	ACGIH TWA (mg/m ³)	10 mg/m ³ as dust
disodium tetraborate, anhydrous (1330-43-4)		
USA - ACGIH	ACGIH TWA (mg/m ³)	2 mg/m ³
USA - ACGIH	ACGIH STEL (mg/m ³)	6 mg/m ³
USA - ACGIH	Remark (ACGIH)	Varies URT irr
sebacic acid (111-20-6)		
Lithuania	IPRV (mg/m ³)	4 mg/m ³

8.2. Exposure controls

- Appropriate engineering controls : Avoid creating mist or spray. Avoid splashing. Ensure good ventilation of the work station.
- Personal protective equipment : Avoid all unnecessary exposure.
- Hand protection : Wear suitable gloves. nitrile rubber gloves. neoprene gloves. PVC. EN374.
- Eye protection : Chemical goggles or safety glasses. EN166.
- Skin and body protection : Wear suitable protective clothing. Impervious clothing
- Respiratory protection : In case of inadequate ventilation wear respiratory protection. Use an approved respirator equipped with oil/mist cartridges. EN 12083.
- Consumer exposure controls : Avoid contact during pregnancy/while nursing.
- Other information : Do not eat, drink or smoke when using this product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- Physical state : Liquid
- Colour : Green.
- Odour : slight.
- Odour threshold : No data available
- pH : 10.5
- Relative evaporation rate (butyl acetate=1) : No data available
- Melting point : No data available
- Freezing point : -50 - -31 °C

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Boiling point	: 105 - 106 °C
Flash point	: None (PMCC)
Auto-ignition temperature	: 371 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: < 0.1 mm Hg @ 20 °C
Relative vapour density at 20 °C	: No data available
Relative density	: 1.043 - 1.049 @ 20 °C
Solubility	: Totally soluble in water in all proportions.
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Sparks. Open flame. Heat.

10.5. Incompatible materials

Strong oxidizers. Strong bases. Strong acids.

10.6. Hazardous decomposition products

alcohols. Aldehydes. Carbon monoxide. Carbon dioxide. Organic acids.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

propylene glycol (57-55-6)	
LD50 oral rat	22000 mg/kg bodyweight
LD50 dermal rat	20800 mg/kg bodyweight
sodium nitrite (7632-00-0)	
LD50 oral rat	180 mg/kg
disodium tetraborate, anhydrous (1330-43-4)	
LD50 oral rat	3450 mg/kg male
LD50 dermal rabbit	> 2000 mg/kg no deaths occurred
LC50 inhalation rat (mg/l)	> 2.03 mg/l 5h - no deaths occurred
sodium tolyltriazole (64665-57-2)	
LD50 oral rat	735 mg/kg bodyweight
LD50 dermal rabbit	> 2000 mg/kg bodyweight
sebacic acid (111-20-6)	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rat	> 2000 mg/kg

Unknown acute toxicity (CLP: Classification, Labelling, Packaging.) - SDS : 0.11% of the mixture consists of ingredient(s) of unknown acute dermal toxicity
0.11% percent of the mixture consists of ingredient(s) of unknown acute inhalation (dust/mist) toxicity

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Not classified

Respiratory or skin sensitisation : Not classified

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Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity (single exposure)	: Not classified
Specific target organ toxicity (repeated exposure)	: Not classified

disodium tetraborate, anhydrous (1330-43-4)	
LOAEL (oral, rat, 90 days)	58.5 mg/kg bodyweight/day
NOAEL (oral, rat, 90 days)	17.5 mg/kg bodyweight/day
Aspiration hazard	: Not classified

SECTION 12: Ecological information

12.1. Toxicity

propylene glycol (57-55-6)	
LC50 fish 1	51400 mg/l 96h fathead minnow
EC50 Daphnia 1	43500 mg/l 48h
EC50 other aquatic organisms 1	27300 mg/l 48h
sodium nitrite (7632-00-0)	
LC50 fish 1	0.11 mg/l
disodium tetraborate, anhydrous (1330-43-4)	
LC50 fish 1	74 mg/l 96h Limanda limanda
sodium tolyltriazole (64665-57-2)	
LC50 fish 1	55 mg/l
EC50 Daphnia 1	15.8 mg/l
sebacic acid (111-20-6)	
LC50 fish 1	> 100 mg/l Danio rerio 96 h; no mortality was observed
EC50 Daphnia 1	> 100 mg/l 48 h

12.2. Persistence and degradability

Engine Ice HI-Performance	
Persistence and degradability	inherently biodegradable.
sodium tolyltriazole (64665-57-2)	
Biodegradation	4 % O2 consumption; 28 days
sebacic acid (111-20-6)	
Persistence and degradability	Readily biodegradable.

12.3. Bioaccumulative potential

Engine Ice HI-Performance	
Bioaccumulative potential	Not expected to bioaccumulate.
propylene glycol (57-55-6)	
Log Kow	-0.78
sodium tolyltriazole (64665-57-2)	
Log Pow	1.083
sebacic acid (111-20-6)	
Log Pow	1.5

12.4. Mobility in soil

Engine Ice HI-Performance	
Ecology - soil	Dissolves in water. If products enter soil, will be highly mobile and may contaminate ground water.

12.5. Results of PBT and vPvB assessment

Component	
disodium tetraborate, anhydrous (1330-43-4)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Do not dispose in household garbage.

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Sewage disposal recommendations	: Do not dispose of waste into sewer.
Waste disposal recommendations	: Dispose in a safe manner in accordance with local/national regulations.
Ecology - waste materials	: Avoid release to the environment.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

Not considered a dangerous good for transport regulations

14.2. UN proper shipping name

Proper Shipping Name (ADR)	: Not applicable
Proper Shipping Name (IMDG)	: Not applicable
Proper Shipping Name (IATA)	: Not applicable
Proper Shipping Name (ADN)	: Not applicable
Proper Shipping Name (RID)	: Not applicable

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR)	: Not applicable
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IMDG

Transport hazard class(es) (IMDG)	: Not applicable
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IATA

Transport hazard class(es) (IATA)	: Not applicable
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ADN

Transport hazard class(es) (ADN)	: Not applicable
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RID

Transport hazard class(es) (RID)	: Not applicable
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14.4. Packing group

Packing group (ADR)	: Not applicable
Packing group (IMDG)	: Not applicable
Packing group (IATA)	: Not applicable
Packing group (ADN)	: Not applicable
Packing group (RID)	: Not applicable

14.5. Environmental hazards

Dangerous for the environment	: No
Marine pollutant	: No
Other information	: No supplementary information available

14.6. Special precautions for user

- Overland transport

No data available

- Transport by sea

No data available

- Air transport

No data available

- Inland waterway transport

No data available

- Rail transport

No data available

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

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SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains substance on the REACH candidate list in concentration $\geq 0.1\%$ or with a lower specific limit: Disodium tetraborate, anhydrous (EC 215-540-4, CAS 1330-43-4)

Contains no REACH Annex XIV substances

15.1.2. National regulations

Germany

VwVwS Annex reference : Water hazard class (WGK) 3, severe hazard to waters (Classification according to VwVwS, Annex 4)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

SZW-lijst van kankerverwekkende stoffen : sodium tolyltriazole is listed

SZW-lijst van mutagene stoffen : sodium tolyltriazole is listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : disodium tetraborate, anhydrous is listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : disodium tetraborate, anhydrous is listed

Denmark

Classification remarks : Emergency management guidelines for the storage of flammable liquids must be followed

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Disclaimer:

Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained herein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purpose(s).

End-use applications **NOT** supported by KOST USA, Inc. for monopropylene glycol. These limitations include products restricted by law, in applications which may raise unacceptable risks, and other applications which KOST USA, Inc. has decided not to support, including minimizing unnecessary risk and liabilities to the company. KOST USA, Inc. does not knowingly market these products into these non-supported applications. This list is not all-inclusive, and KOST USA, Inc. reserves the right to modify the same at any time.

- The use of production of tobacco and in the manufacture of tobacco products (including but not limited to additives, humectants, filters, inks, and paper)
- The use for the generation of artificial smoke / theatrical fogs / mist. This includes applications such as artificial / e-cigarettes.
- The use as ingredient in fuel for warming foods (Sterno™-like application) or in fuel for heating an enclosed space where human exposure is possible.
- The use in the manufacture of munitions.
- The use in aircraft deicers.
- KOST USA propylene containing products can not be upgraded to or substituted for USP monopropylene glycol, nor used in any pharmaceutical or other application such as cosmetics and personal or animal health care.
- The use as a non-reacted component in a formulation for direct internal or external human / animal contact, including, but not limited to ingestion, inhalation, and skin contact and in medical / veterinary devices and medical / veterinary. Examples of some such applications are uses as a direct component in foods, beverages, pharmaceuticals, cosmetics, personal care products or children's products.
- The use for consumer or hospital usage for deodorizing or air "purifying" purposes by spraying as an aerosol.
- The use as a non-reacted component in adhesives, plasticizers, and softening agents for packaging having direct contact with food or beverage.
- The use as a non-reacted component in the formulation of glues, pastes, ice / heat packs or other items where the potential for significant human contact and/or ingestion exists (including but not limited to children's school glue/paste or arts/craft glue/paste, toys, children products).

For more information contact your KOST USA, Inc. representative.

Indication of changes:

Original Document.

Abbreviations and acronyms:

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	ACGIH (American Conference of Government Industrial Hygienists)
	ATE: Acute Toxicity Estimate
	CAS (Chemical Abstracts Service) number
	CLP: Classification, Labelling, Packaging.
	EC50: Environmental Concentration associated with a response by 50% of the test population.
	GHS: Globally Harmonized System (of Classification and Labeling of Chemicals).
	LD50: Lethal Dose for 50% of the test population
	OSHA: Occupational Safety & Health Administration
	STEL: Short Term Exposure Limits
	TSCA: Toxic Substances Control Act
	TWA: Time Weighted Average

Data sources : European Chemicals Agency (ECHA) Registered Substances list. Accessed at <http://echa.europa.eu/>.
Krister Forsberg and S.Z. Mansdorf, "Quick Selection Guide to Chemical Protective Clothing", Fifth Edition.
National Fire Protection Association; Fire Protection Guide to Hazardous Materials; 10th edition.
TSCA Chemical Substance Inventory. Accessed at <http://www.epa.gov/oppt/existingchemicals/pubs/tscainventory/howto.html>.

Other information : None.

Full text of R-, H- and EUH-statements:

Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Ox. Sol. 3	Oxidising Solids, Category 3
Repr. 1B	Reproductive toxicity, Category 1B
Skin Corr. 1B	Skin corrosion/irritation, Category 1B
H272	May intensify fire; oxidiser
H301	Toxic if swallowed
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H360FD	May damage fertility. May damage the unborn child
H400	Very toxic to aquatic life
H411	Toxic to aquatic life with long lasting effects
EUH210	Safety data sheet available on request
R22	Harmful if swallowed
R25	Toxic if swallowed
R34	Causes burns
R50	Very toxic to aquatic organisms
R51/53	Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
R60	May impair fertility
R61	May cause harm to the unborn child
R8	Contact with combustible material may cause fire
C	Corrosive
N	Dangerous for the environment
O	Oxidising
T	Toxic
Xn	Harmful

Redstone SDS EU CLP for KOST

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